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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,891	12/11/2000	Kimio Hagi	50090-250	2930

7590 09/24/2002

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EXAMINER

RODRIGUEZ, ISABEL

ART UNIT PAPER NUMBER

2836

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/732,891

Applicant(s)

HAGI, KIMIO

Examiner

Isabel Rodriguez

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1,2,5, and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagao et al. (US 6,252,758).

Regarding claims 1, 5, and 7-8, Nagao et al. discloses an electrostatic chuck system (Fig. 5) comprising: an electrostatic chuck having an electrode (15), a power supply (6, 10), and a voltage control section (8) for controlling and increasing or decreasing the applied voltage stepwise. See col. 2 lines 33-36. It is inherent that such a system would yield a method of manufacturing utilizing said system and an apparatus for performing such method of manufacturing.

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Regarding claim 2, Nagao et al. discloses the electrostatic chucking system further comprising a temperature sensor (11), wherein a signal from sensor is input to said voltage control section to control the applied voltage. See col. 5 lines 3-9.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagao in view of Hoinkis et al. (US 5,872,694).

Nagao et al. discloses the electrostatic chucking system comprising a temperature sensor. Nagao et al. does not disclose a warpage sensor. Hoinkins et al. discloses an electrostatic chucking system (10) comprising a warpage sensor (20) wherein a signal from sensor is input to a voltage control section (18) to control the applied voltage. See Fig. 1. Warpage varies from wafer to wafer. By sensing the warpage an optimum chucking voltage for each wafer to an electrostatic chuck can be determined. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a warpage sensor to provide an optimum chucking voltage and substantially avoid excessive amounts of backside abrasion and scratching of the wafer while it is being processed. See col. 2 lines 31-38.

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5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagao in view of Hunter (US 6,244,121).

Nagao et al. discloses the electrostatic chucking system comprising a temperature sensor used to determine the distance between the wafer and the chuck. Nagao et al. does not disclose a distance sensor. Hunter discloses an electrostatic chucking system comprising a distance sensor wherein a signal from sensor is input to said voltage control section to control the applied voltage. See col. 9 lines 60-62. It would have been obvious to one of ordinary skill in the art at the time the invention was made use a distance sensor to determine the separation distance because the distance sensor is more cost efficient. The weight of the distance sensor might be increased if necessary in order to reduce the cost. See col. 10 lines 4-5.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isabel Rodriguez whose telephone number is 703-305-4761. The examiner can normally be reached on M-F 8:30-5:00.

  
KIM HUYNH  
PRIMARY EXAMINER

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 703-308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7724 for regular communications and 703-308-7704 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

IR  
September 13, 2002

 9/17/02  
KIM HUYNH  
PRIMARY EXAMINER